PATENT ABSTRACTS OF JAPAN

(11) Publication number: **09147144 A**

(43) Date of publication of application: **06 . 06 . 97**

(51) Int. Cl

G06T 17/20
B29C 33/44
G06F 17/50
// B21D 37/20
B22D 17/22
B29C 45/40

(21) Application number: **07299504**

(22) Date of filing: **17 . 11 . 95**

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(54) **DIE DRAFT VERIFICATION SYSTEM IN FREE-FORM SURFACE**

(57) Abstract:

PROBLEM TO BE SOLVED: To improve the design accuracy and to efficiently perform a threedimensional design while performing the verification of a die draft angle by inputting the pitch of a verification point to be measured and automatically calculating the die draft of each of a YZ plane and an XY plane.

SOLUTION: The endpoint cut into a matrix is calculated at the space of the numerical value designated on a free-form surface in which a trimming die draft is verified. Next, the normal vector value B in each endpoint A... is converted into the projection vector value C of a YZ plane and the die draft angle θ_2 of the YZ plane is calculated by the inner product of the value and a Z-axis vector D. In the same way, the normal vector value of each endpoint A... is converted into the vector value projected on an XY plane and the die draft angle of the XY plane is calculated by the inner product of the value and an X-axis vector. Next, after the die draft angle in each calculated plane is compared, the die draft angle in each endpoint A... is found. Further, the result display is performed by preparing the circle divided by colors according to the angle found for discriminating the change of the die draft angle at a verification location, etc.